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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/841,196

04/24/2001

Takahiro Fujimori

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EXAMINER

PEZZLO, JOHN

ART UNIT

PAPER NUMBER

2662

DATE MAILED: 05/26/2004

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/841,196

Applicant(s)

FUJIMORI ET AL.

Examiner

John Pezzlo

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-24, 31, 32 and 39-41 is/are rejected.
- 7) ☒ Claim(s) 25-30, 33-38 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. 08/943,611.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

I. Claims 15-23 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 6,266,344 B1.

Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following:

1. Comparing claim 15 of the invention with claim 2 of the patent, both disclose
 - a) connecting a plurality of electronic devices provided with a communication interface based on the IEEE 1394 standard by at least one type of cable selected from the group consisting of an optical-fiber cable, an unshielded-twisted pair (UTP) cable and a stand-alone cable comprising only one shielded-twisted pair (STP) cable
 - b) allocating periodic bit regions which are not used at a low data rate to transfer data in a data packet to be transmitted, on a data stream by transmitting data bits at said low data rate only

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in predetermined portions of periodic intervals of said data stream, without transmitting any data during the allocated periodic bit regions, so as to facilitate a change in data communication to communication at higher data rates defined by the IEEE 1394 standard

c) communicating data between said electronic devices

The invention does not expressly disclose transmitting data rates based on the number of times one or more types of predetermined speed-control symbols is inserted into said stream.

It would have been obvious to a person of ordinary skill in the art to transmit data rates based on the number of times one or more types of predetermined speed-control symbols is inserted into said stream because different rates could be utilized on the channel to accommodate the data rate requirements of the user. The benefit being higher customer satisfaction.

2. Comparing claim 17 of the invention with claim 8 of the patent, both disclose

a) communicating data using an arrangement of bits corresponding to a maximum data rate, when a communication channel for performing data communication among said plurality of electronic apparatuses using a multi-purpose cable different from said cable defined in said data-communication system is used

b) allocating on a data stream periodic bit regions not used to transfer data in a data packet when said multi-purpose cable is used to perform the data communication at a low data rate, by transmitting data bits at said low data rate only in predetermined portions of periodic intervals of said data stream, without transmitting any data during the allocated periodic bit regions, so as to facilitate a change in data communication to higher data rate communication

The invention does not expressly disclose transmitting data rates based on the number of times one or more types of predetermined speed-control symbols is inserted into said stream.

It would have been obvious to a person of ordinary skill in the art to transmit data rates based on the number of times one or more types of predetermined speed-control symbols is inserted into said stream because different rates could be utilized on the channel to accommodate the data rate requirements of the user. The benefit being higher customer satisfaction.

3. Comparing claim 21 of the invention with claim 3 of the patent, both disclose
 - a) connecting a plurality of electronic devices provided with a communication interface based on the IEEE 1394 standard by at least one type of cable selected from the group consisting of an optical-fiber cable, an unshielded-twisted pair (UTP) cable and a stand-alone cable comprising only one shielded-twisted pair (STP) cable
 - b) providing a Tp bias effect on said at least one type of cable by transmitting predetermined symbols thereon, said Tp bias effect being used to detect one of said devices being connected to another of said devices

The invention does not expressly disclose transmitting data rates based on the number of times one or more types of predetermined speed-control symbols is inserted into said stream.

It would have been obvious to a person of ordinary skill in the art to transmit data rates based on the number of times one or more types of predetermined speed-control symbols is inserted into said stream because different rates could be utilized on the channel to accommodate the data rate requirements of the user. The benefit being higher customer satisfaction.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

II. Claims 24, 32, and 40 are rejected under 35 U.S.C. 102(e) as being anticipated by Sekine et al. (US 5,808,660) hereinafter Sekine.

1. Regarding claims 24, 32, 40, and 41 – Sekine discloses a first terminal operably connectable to an IEEE 1394 serial bus cable having two twisted pairs, refer to Figures 8 and 9 and column 9 line 25 to column 10 line 62.

Sekine discloses a second terminal operably connectable to a multi-purpose cable for use as at least part of said serial data bus when operably connected to said second terminal, said multi-purpose cable selected from the group consisting of an optical-fiber cable, an unshielded-twisted pair (UTP) cable, and a stand-alone cable comprising only one shielded-twisted pair (STP) cable, refer to Figures 8 and 9 and column 9 line 25 to column 10 line 62.

Sekine discloses an IEEE 1394 physical-layer protocol logic section operative to perform serial data bus initialization and arbitration, refer to Figures 8 and 9 and column 9 line 25 to column 10 line 62.

Sekine discloses a first conversion section connected between said logic section and said first terminal to convert signals transmitted and received between said serial bus cable and said logic section, refer to Figures 8 and 9 and column 9 line 25 to column 10 line 62.

Sekine a second conversion section connected between said second terminal and said logic section to convert signals transmitted and received to and from said logic section and said optical-fiber, UTP or stand-alone cable, refer to Figures 8 and 9 and column 9 line 25 to column 10 line 62.

2. Regarding claim 41 – Sekine discloses said serial data bus data-communication system is a system in accordance with the IEEE 1394 high speed serial bus standard, said serial bus cable is an IEEE 1394 cable, and said physical-layer protocol logic section is an IEEE 1394 physical-layer protocol logic section, refer to Figures 8 and 9 and column 9 line 25 to column 10 line 62.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

III. Claims 31 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sekine (same as above).

1. Regarding claims 31 and 39 – Sekine discloses a cable system wherein the system supports both 1394 serial bus and a SONET fiber optic cable, refer to Figures 8 and 9 and column 9 line 25 to column 10 line 62.

Sekine does not expressly disclose wherein connection of said second terminal to said UTP or stand alone cable is made through an insulating transformer, and connection of said second terminal to said optical-fiber cable is made through an electro-optical converter.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to utilize a transformer to couple the second terminal through the cable and an electro-optical converter to connect to the fiber. The suggestion/motivation for doing so would have been that Sekine discloses the conversion between the optical system (SONET) and the cable system (1394) and utilizing a transformer and an electro-optical converter are proven techniques. The benefit being that utilizing proven techniques reduces the risks and costs during development and allows off-the-shelf parts to be used which are highly reliable providing for a high degree of customer satisfaction.

Allowable Subject Matter

Claims 25-30 and 33-38 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. Chisholm et al. (US 6,115,764) discloses an acyclic cable bus having redundant path access.
2. Osakabe et al. (US 5,933,430) discloses a data communication method.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Pezzlo whose telephone number is (703) 306-5420. The examiner can normally be reached on Monday to Friday from 8:30 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached on (703) 305-4744. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C.

or faxed to:

(703) 872-9306

For informal or draft communications, please label "PROPOSED" or "DRAFT"

Hand delivered responses should be brought to:

Receptionist (Sixth floor)


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John Pezzlo

20 May 2004



JOHN PEZZLO
PRIMARY EXAMINER